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Case No. 10971957-1

5. The optical system of claim 4, wherein said occluding element is positioned adjacent the lens side surface of said window.

6. The optical system of claim 5, wherein said occluding element comprises an opaque material deposited on the lens side surface of said window.

7. The optical system of claim 1, wherein said occluding element comprises a substantially circular shape.

8. An optical system for forming an image of at least a portion of an illuminated area on an object, the illuminated area being characterized by at least one brightly illuminated region and at least one less brightly illuminated region, comprising:

lens means positioned a spaced distance from the object for forming an image of at least a portion of the illuminated area on the object;

telecentric aperture stop means operatively associated with said lens means for blocking selected light rays refracted by said lens means; and

occluding means positioned between said lens means and the object for blocking a predetermined amount of light from the brightly illuminated region but not substantially blocking light from the less brightly illuminated region.

9. A method of forming an image of at least a portion of an illuminated area on an object, the illuminated area being characterized by at least one brightly illuminated region and at least one less brightly illuminated region, comprising:

positioning a lens a spaced distance from the illuminated area on the object, said lens having an image side focal plane;

10 positioning an aperture stop at about the image side focal plane of said lens; and

blocking a predetermined amount of light from the brightly illuminated region before the light from the brightly illuminated region is refracted by said lens.

10. A navigation system for an image sensing device, said navigation system producing a navigation signal related to navigation light received from an illuminated navigation area on an object, the illuminated navigation area being characterized by at least one brightly illuminated region and at least one less brightly illuminated region, comprising:

a detector;

10 a lens having an image side focal plane, said lens being positioned between said detector and the illuminated navigation area on the object so that said lens forms on said detector an image of at least a portion of the illuminated navigation area;

15 an aperture stop positioned so that it is substantially co-planar with the image side focal plane of said lens; and

20 an occluding element positioned between said lens and the illuminated area on the object so that said occluding element blocks a predetermined amount of navigation light from the brightly illuminated region but does not substantially block navigation light from the less brightly illuminated region.

11. The navigation system of claim 10, wherein said

lens includes an object side surface and wherein said occluding element is positioned adjacent the object side surface of said lens.

12. The navigation system of claim 11, wherein said occluding element comprises an opaque material deposited on the object side surface of said lens.

5 13. The navigation system of claim 10, further comprising a window positioned between the object side surface of said lens and the illuminated area on the object, said window having an object side surface and a lens side surface.

14. The navigation system of claim 13, wherein said occluding element is positioned adjacent the lens side surface of said window.

15. The navigation system of claim 14, wherein said occluding element comprises an opaque material deposited on the lens side surface of said window.

16. The navigation system of claim 10, wherein said occluding element comprises a substantially circular shape.

5 17. A navigation system for producing a navigation signal related to navigation light received from an illuminated navigation area on an object, the illuminated navigation area being characterized by at least one brightly illuminated region and at least one less brightly illuminated region, comprising:

detector means for producing an output signal related to light incident thereon;

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10 lens means positioned between said detector means and the object for forming on said detector an image of at least a portion of the illuminated navigation area;

15 telecentric aperture stop means operatively associated with said lens means for blocking selected navigation light rays refracted by said lens means; and

20 occluding means positioned between said lens means and the object for blocking a predetermined amount of navigation light from the brightly illuminated region but not substantially blocking navigation light from the less brightly illuminated region.

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